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Amendments to Specification

In the specification, the "Cross Reference To Related Applications" on page 2, has been amended to include the status of parent application 09/357,339, which is now abandoned.

In addition, a paragraph entitled "STATEMENT REGARDING FEDERAL RIGHTS" has been added at page 2, line 1, of the specification.

Rejections Under 35 USC §112

Claims 20-22 have been rejected under 35 USC §112, second paragraph due to an informality in claim 20 and indefiniteness in claims 22. In response to these rejections claims 20 and 22 have been amended.

Rejections Under 35 USC §102 and 35 USC §103

Claims 1, 3, 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18, 22, 23, 24, 25, 27, 28, 29, 30, 31 and 32 have been rejected under 35 USC §102(b) as being anticipated by the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998.

Claims 1, 3, 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18, 22, 23, 24, 25, 27, 28, 29, 30, 31 and 32 have been rejected under 35 USC §102(b) as being anticipated by the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated August 1998.

Claims 1-19 and 22-32 have been rejected under 35 USC §102(a) as being anticipated by the document "Fuzzy and

Probalistic Control Techniques Applied To Problems of the Chemical Process Industries" dated July 2001.

Claims 20-21 and 33-34 have been rejected under 35 USC §103(a) as being unpatentable over the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998, or the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated August 1998, or the document "Fuzzy and Probalistic Control Techniques Applied To Problems of the Chemical Process Industries" dated July 2001, in view of Davis (US Patent No. 5,499,586).

In response to the rejections under 35 USC §102 and 35 USC §103 the claims have been amended.

In addition, enclosed with this Amendment is an Affidavit under 37 CFR §1.131. The Affidavit demonstrates reduction to practice of the claimed invention in the United States prior to the effective date of the document "Fuzzy and Probalistic Control Techniques Applied To Problems of the Chemical Process Industries".

35 USC §102(b) Over May 1998 Article "A Fuzzy Controlled Three-Phase Centrifuge For Waste Separation" and August 1998 Article "A Fuzzy Control System For A Three-Phase Oil Field Centrifuge"

Independent claim 1 has been amended to include the limitations of dependent claim 2. Claim 2 has been canceled. As claim 2 was not included in the 35 USC §102(a) rejections, the rejections of claims 1 and 3-5 over the cited articles are submitted to have been overcome.

Independent claim 6 has been amended to include the limitations of dependent claims 7 and 9. Claims 7 and 9 have been canceled. As claim 9 was not included in the 35 USC §102(a) rejections, the rejections of claims 6, 8 and

10-11 over the cited articles, are submitted to have been overcome.

Dependent claim 12, which was not included in the 35 USC §102(a) rejections, has been rewritten in independent form with the limitations of independent claim 6. Claims 13 and 14 have been amended to depend on claim 12. With these amendments, the 35 USC §102(a) rejections of claims 12-14 over the cited articles are submitted to have been overcome.

Independent claim 15 has been amended to include the limitations of dependent claim 18 of "a filter configured to differentiate the input from the first sensor and the second sensor from noise". Claim 18 has been canceled. Independent claim 15 is now similar to claim 2, which was not included in the rejections 35 USC §102(a). With these amendments, the 35 USC §102(a) rejections of claims 15-17 and 19-22 over the cited articles are submitted to have been overcome.

Independent claim 23 has been amended to include the step of "differentiating noise from signals representative of the feed variable". Claim 23 is thus similar to claim 26, which was not included in the rejections under 35 USC §102(a). Claim 26 has been canceled. With the amendments to claim 23, the 35 USC §102(a) rejections of claims 23-25 and 27-28 over the cited articles are submitted to have been overcome.

Independent claim 29 has been amended to include the step of "filtering signals representative of the basic solids and water content and the cold feed temperature from noise". With the amendments to claim 29, the 35 USC §102(a) rejections of claims 29-32 over the cited articles are submitted to have been overcome.

35 USC §102(a) Rejections Over July 2001 Document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries

Attached to this Amendment is an Affidavit Under 37 CFR §1.131 which is submitted for the purpose of removing the 35 USC §102(a) and 35 USC §103(a) rejections over this reference. The Affidavit demonstrates that the presently claimed invention was reduced to practice in the United States prior to the effective date (July 2001) of the reference.

35 USC §103(a) Rejections

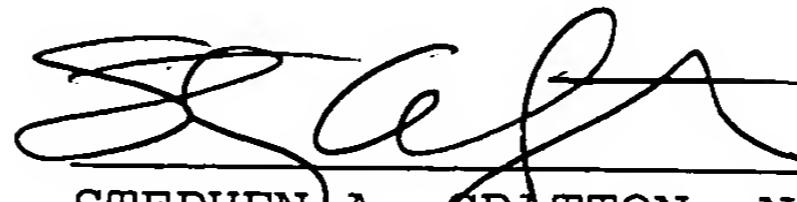
The 35 USC §103(a) rejections of claims 20-21 and 33-34 are submitted to have been overcome by the amendments to independent claims 15 and 29 and by the Affidavit under 37 CFR §1.131.

Conclusion

In view of the above amendments, arguments and Affidavit, favorable consideration and allowance of claims 1, 3-6, 8, 10-17, 19-25 and 27-34 is respectfully requested. Should any issues arise that will advance this case to allowance, the Examiner is asked to contact the undersigned by telephone.

DATED this 20th day of January, 2004.

Respectfully submitted:



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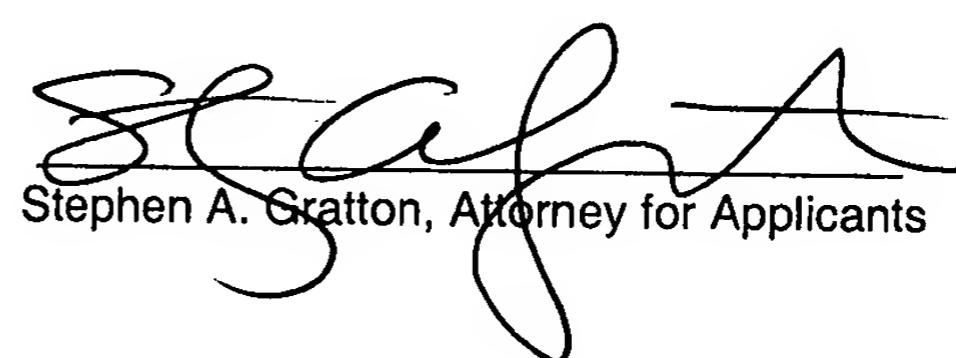
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CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class mail in an envelope addressed to: Mail Stop Non-Fee Amendments, Commissioner For Patents, PO BOX 1450, Alexandria, VA 22313-1450 on this 20th day of January, 2004.

January 20, 2007

Date of Signature



Stephen A. Gratton, Attorney for Applicants